Attorney Docket

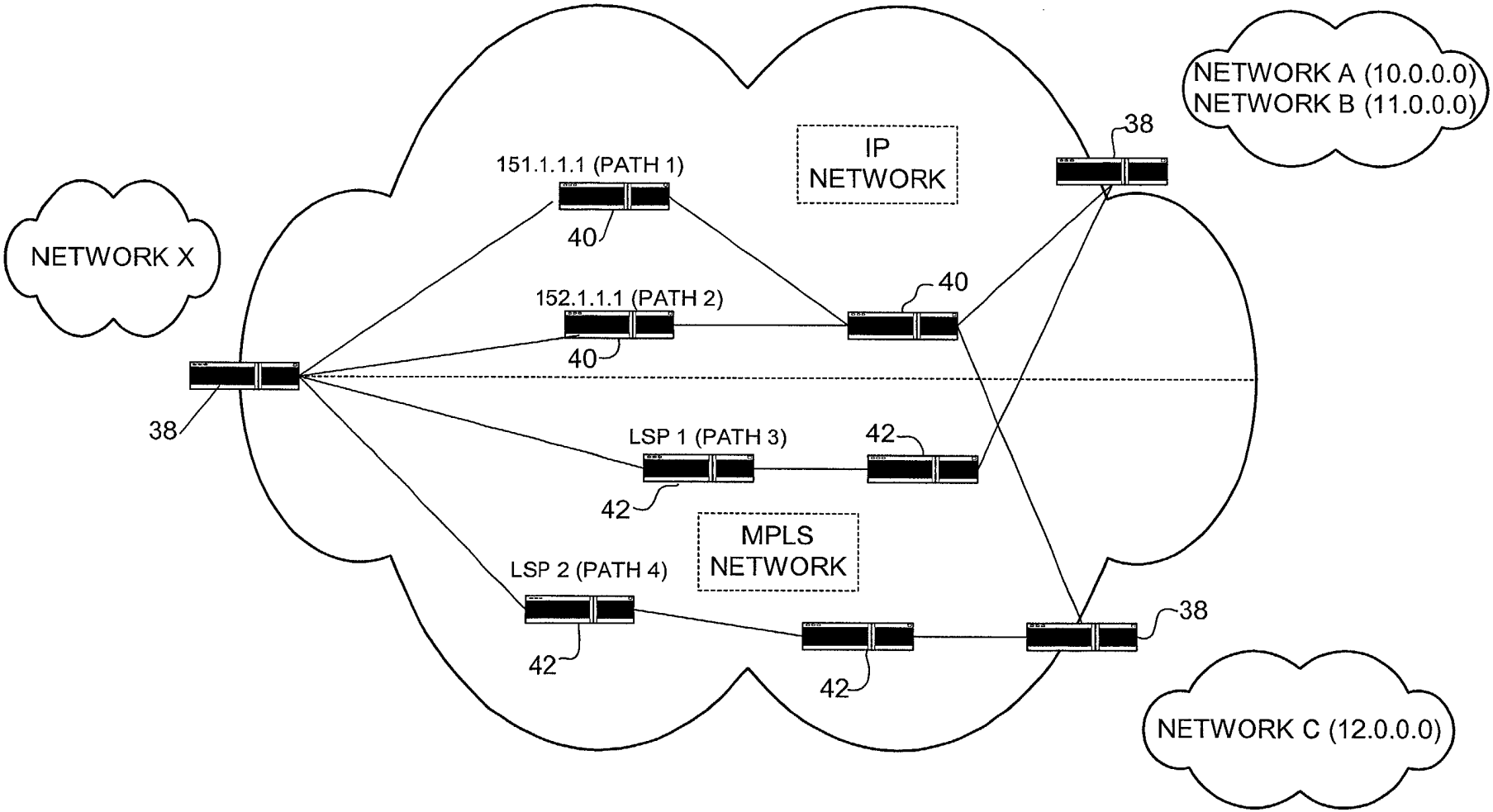

FIG. 1

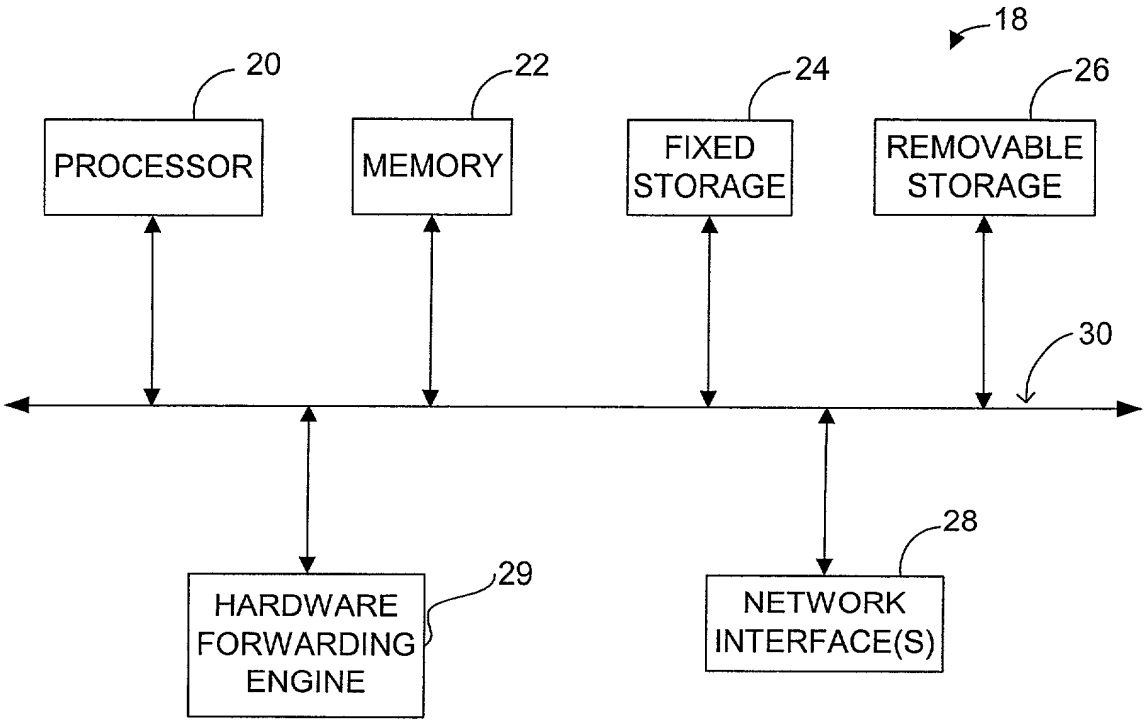
18
20
22
24
26
PROCESSOR
MEMORY
FIXED STORAGE
REMOVABLE STORAGE
30
28
29
HARDWARE FORWARDING ENGINE
NETWORK INTERFACE(S)

FIG. 2

TABLE Ia

Prefix A (10.0.0.0)
PATH 1
PATH 2
PATH 3

TABLE IIa

Prefix B (11.0.0.0)
PATH 1
PATH 2
PATH 3

TABLE IIIa

Prefix C (12.0.0.0)
PATH 1
PATH 2
PATH 4

FIG. 3

TABLE Ib

Prefix A (10.0.0.0)	
PATH	PATH ID
PATH 1	151.1.1.1
PATH 2	152.1.1.1
PATH 3	224.0.0.1

TABLE IIb

Prefix B (11.0.0.0)	
PATH	PATH ID
PATH 1	151.1.1.1
PATH 2	152.1.1.1
PATH 3	224.0.0.1

TABLE IIIb

Prefix C (12.0.0.0)	
PATH	PATH ID
PATH 1	151.1.1.1
PATH 2	152.1.1.1
PATH 4	224.0.0.2

FIG. 4

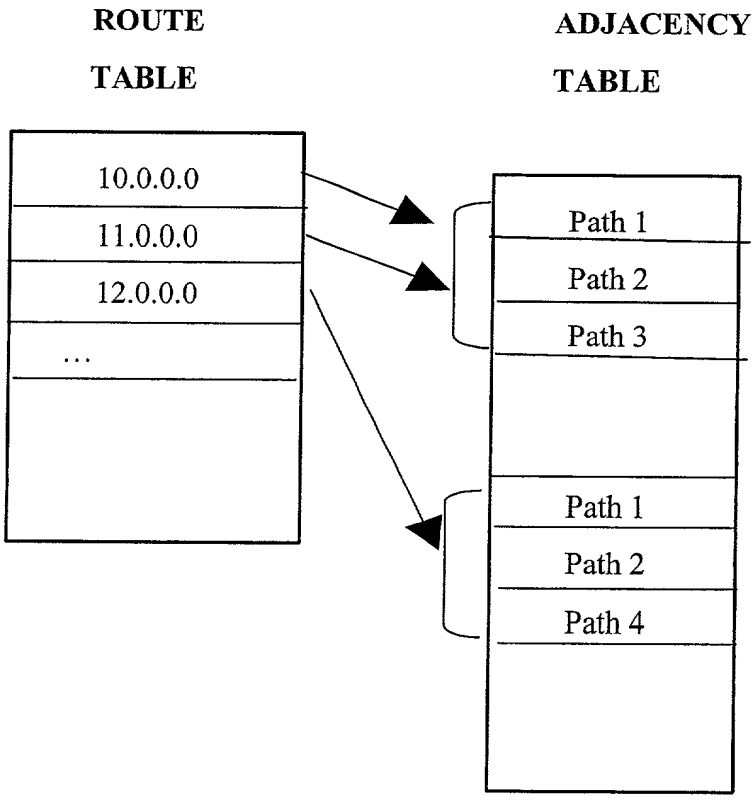
ROUTE
TABLE
ADJACENCY
TABLE
10.0.0.0
11.0.0.0
12.0.0.0
...
Path 1
Path 2
Path 3
Path 1
Path 2
Path 4

FIG. 5

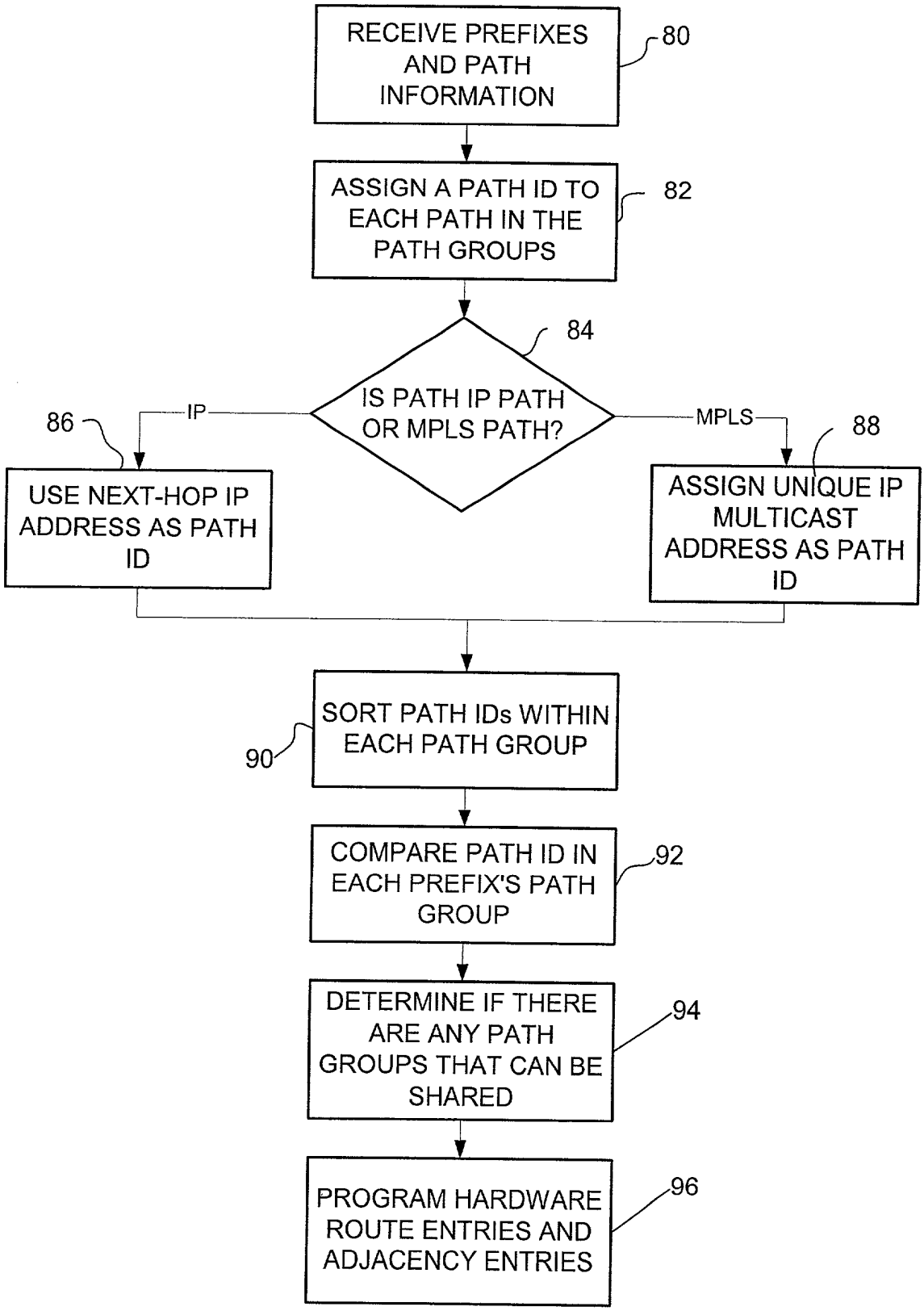
RECEIVE PREFIXES AND PATH INFORMATION
80
ASSIGN A PATH ID TO EACH PATH IN THE PATH GROUPS
82
84
IS PATH IP PATH OR MPLS PATH?
IP
MPLS
86
88
USE NEXT-HOP IP ADDRESS AS PATH ID
ASSIGN UNIQUE IP MULTICAST ADDRESS AS PATH ID
SORT PATH IDs WITHIN EACH PATH GROUP
90
COMPARE PATH ID IN EACH PREFIX'S PATH GROUP
92
DETERMINE IF THERE ARE ANY PATH GROUPS THAT CAN BE SHARED
94
PROGRAM HARDWARE ROUTE ENTRIES AND ADJACENCY ENTRIES
96

FIG. 6